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GEORGE W. YORK,
Editor.

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WEEKLY



REV. E. T. ABBOTT, of Missouri,
Director of the National Bee-Keepers' Association.

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Reformed Spelling.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound. Also some other changes are used.

The Weekly Budget

Mr. H. M. Carr, of Thomas Co., Ga., writes us Oct. 8th, as follows:

"This is my first year with the excellent American Bee Journal, and I am well pleased with it. As one of the common readers I wish to say I like your short spelling. The 'new dress' pleases me, too."

Mr. W. P. Root, otherwise "Stenog," to whom we referred on page 628, offers the following defense:

MR. YORK:—In your issue for this week is a criticism on me which I feel ought to be answered in your columns. You refer to the expression "red clover queen" as being inconsistent with my claim that it should be "red-clover queen." The fact is, the hyphen was there in the first place, but, like Zacheus of old, it was short of stature, and hence made no impression. When an adjective stands before a noun, and the two words become an adjective in turn, they should be united; as left-hand figure, long-eared rabbit. This rule is never questioned, and is universally observed by proof-readers. Any system of punctuation that makes no distinction between twenty-eight frame hives and twenty eight-frame hives is not worthy of the name. I call for a criticism of rules, and not a mere oversight on my part in their proper application. Sweet clover stems means that the stems are sweet, and nothing else. Of course, the intelli-

gent reader may not be misled; but suppose you really mean to speak of clover stems that are sweet; then that reader would be misled, supposing you meant sweet-clover stems. Disregard of this principle is indefensible in toto. I leave it to Mr. Hasty. W. P. ROOT.

Medina Co., Ohio, Oct. 6.

If Mr. Root hadn't left it to Mr. Hasty, we would say that not a single one of our readers would be misled by the omission of a hyphen between the two words "sweet clover," no matter how or when they are used. No one would ever think of the stems being red, when he reads about "red clover stems;" nor would any one be misled about thinking of an "eared rabbit," being "long" in body when he reads of a "long eared rabbit." If any one desired to say that the stems of a certain kind of red clover are red he would likely say it in that way.

Of course, we are willing to admit that the hyphen may properly be used in the illustrations mentioned; but we are equally free to admit that the editors and proof-readers are the ones who should see to it that all contributions appear in print in correct English—as to words and punctuation—and that such matters ought not to be referred to in public print except in

general newspapers, or in school journals or books on the subject. We believe much harm has been done already from what has been said in bee-papers on this subject. We only hope that none of our readers or contributors will ever feel that they can't write the English language correctly enough to suit us. We are willing to be responsible for the correct appearance in print of anything sent to us for the American Bee Journal, so no one need fear writing to us in the best manner he knows, and let it go at that.



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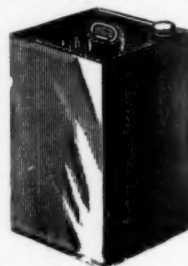
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BEE JOURNAL

40th YEAR

CHICAGO, ILL., OCTOBER 18, 1900.

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Editorial Comments.

Comparison of Races of Bees, or at least three of them, is given in the American Bee-Keeper by F. Greiner, and he ranges them as follows:

In the order of general preference among bee-keepers, Italians stand at the head, Carniolans second, blacks last.

In the order of beauty: Italians, Carniolans, blacks.

As to gentleness: Carniolans, Italians, blacks.

As to prolificness: Carniolans, Italians, blacks.

By properly manipulating the brood-nest one can get an Italian queen to lay as many eggs as a Carniolan; but left to themselves the Italians crowd the brood-nest with honey, preventing the queen from doing her best at laying.

Carniolans are most given to swarming, Italians least.

As to whiteness in capping honey, the order is: Carniolans, blacks, Italians. Italians are worse than the others in gathering propolis and in storing pollen. In conclusion Mr. Greiner says:

The special features which make the Italian bee a favorite with the bee-keepers generally are: 1, their beauty; 2, their manner of clinging to the combs while being handled, making it easy to find queens; 3, their gentleness; 4, their greater vim and determination to keep their combs free from wax-moths, and protecting their hives better generally. Along all these lines they do excel the other races by a long way.

How Many Acres Will Support 100 Colonies? is a question sure to be asked sooner or later by every bee-keeper who desires to engage in bee-keeping to any considerable extent. Just as surely as he asks the question is he likely to be disappointed in getting an answer. Those of longest experience hardly dare to venture more than the broadest kind of a guess. When a positive answer is given, it is likely to be found nothing more than a guess, and sometimes a very wild one. In the Canadian Bee Journal the unqualified statement is made that "100 acres will maintain 150 colonies." Not many would name so high a number of colonies for that amount of territory.

Speaking of the distance bees go in quest of stores, G. M. Doolittle says: "I claim they go from 3 to 6 miles from choice." Taking the average of that as $4\frac{1}{2}$ miles, we would understand that any apiary on any given spot, if it contained enough bees, would gather all the nectar within $4\frac{1}{2}$ miles. A circle having $4\frac{1}{2}$ miles as its radius contains 40,715 acres. If 100 acres will maintain 150 colonies, then 40,715 acres will maintain 61,072. It would be a pretty large apiary that would contain 61,072 colonies!

For the sake of making some little approximation toward an answer, it may not be amiss to do some figuring. While not all might agree with Mr. Doolittle as to bees foraging as far as 3 to 6 miles from choice, probably not many would say that $1\frac{1}{2}$ miles was the limit of profitable

foraging. But for the moment suppose we set it at that. Neither would many say that the average locality would support more than 100 colonies in the most profitable manner. If we put 100 colonies in an apiary, and they work no farther than $1\frac{1}{2}$ miles from home, it will take a little more than 45 acres to support each colony.

If we put 100 colonies in one spot, and allow 100 acres to each colony, that will make not quite $2\frac{1}{4}$ miles as the distance they will travel in quest of stores. While some might want the distance put less than $2\frac{1}{4}$ miles, there would be just as many who would say that 100 was too large a number for one apiary, so it is quite likely that if an attempt was made to average opinions, the result would not be far from saying that in the average location it takes about 100 acres to support each colony of bees.

Seasonable Reading.—There is a good deal in what S. P. Culley says in the Progressive Bee-Keeper, when he says:

"Speaking of seasonable articles, the most seasonable time to write is just too late to be seasonable to read. One can write best while all details are fresh in mind. Keep your Progressives, file them away, and refer to them for seasonable information. Seasonable writing is as important as seasonable reading."

Only that last sentence is probably a slip, and should read, "Seasonable reading is as important as seasonable writing."

Bisulphide of Carbon is much spoken of nowadays in place of sulphur for destroying wax-worms, with the special advantage that it kills eggs as well as worms. It appears there are two kinds, the pure and the crude, the crude being perhaps the better of the two for bee-keepers. It also appears that the fumes being heavier than air, the bisulphide should be placed above rather than below the combs to be fumigated. The following extract from Farm Student's Review, copied in Gleanings in Bee-Culture, is of interest:

This compound, when pure, forms a colorless mobile liquid having a peculiar odor, and, when taken internally, is a violent poison. As usually obtained it contains impurities in the form of other compounds of sulphur, which give it a strong and extremely offensive odor, and when inhaled soon causes death. For the purpose of destroying gophers the crude bisulphide is better and much cheaper than the pure article. Care should be taken in using it as it is both inflammable and explosive. Its efficacy depends on the fact that its vapor is heavier than air, and, when introduced into burrows, it flows like water into all the recesses. This fact should be borne in mind in using it in sloping ground, as, unless the poison is introduced at the highest opening of the burrow, a certain part of the hole will remain free from it where the animal may take refuge.

Does Climate Affect the Color of Honey?—It has been said that honey from any one honey-plant is darker in the South than in the North. C. A. Hatch, in the Progressive Bee-Keeper, says this is a mistake. In proof of the view that the hot climate makes the honey dark is the fact that alfalfa honey of Arizona is darker than that of Col-

orado; also the honey from the second crop of alfalfa is darker than the first crop gathered when it is cooler. But Mr. Hatch argues that if the difference in color were due to temperature, then a very hot spell should darken the honey, whereas in the same field the color is the same regardless of temperature. He asks the pertinent question whether white clover honey is darker in Kentucky than in Minnesota, or whether horsemint honey is darker in Texas than in Wisconsin. The darker color he attributes to mixture. The bees work at the same time on flowers that yield darker honey, so the second crop of alfalfa has in it enough honey from darker sources to color it.

A Boy for Bees to Cluster On is the story told in the Austrian-Hungarian Bee Journal. A bare-headed 10-year-old boy stood near by as a swarm issued. After circling about for a short time, the swarm began to settle on the head of the boy. The father took in the situation at a glance, and called to the boy, who had often watched the operation of hiving a swarm: "Don't stir, Hans; shut your mouth and eyes, and I'll hive the swarm in a jiffy." The boy obeyed; the father drenched with water the bees that enveloped the boy's head, which he bent forward while he gently brushed the bees into a straw skep held beneath. Not a sting did the boy receive.

Developing Short-Tubed Red Clover.—Editor Root has been advocating the production of a strain of red clover with corolla-tubes so short that ordinary bees can get the nectar out of them. E. E. Hasty, a few years ago, made some effort in that direction, and tells something about the work in *Gleanings in Bee-Culture*. What he says is not extremely encouraging, but valuable in directing any one who may desire to take up the work. On the whole it may be easier to fit the bees to common red clover than to fit the clover to the bees. Mr. Hasty says in part:

And what can I tell the new volunteers which will be to their profit? Perhaps not very much. I'll advise them to keep distinct in their minds the three kinds of work to be done. Call them, if you please, A work and B work and C work. The A of it is to go into the fields and select short-tubed clovers. Better take plenty of time and do lots of this, as this is likely to be the most encouraging part of it (perhaps all the encouragement you'll get). Field clovers vary greatly—vary in the line of being lots of long-tubed ones and lots of short-tubed ones, and also vary in the line of their being few and rare specimens, which can be found by long hunting, much more hopeful than the easy-found ones.

Work B is the slow and tedious work of raising seedlings year after year, and *keeping them from backsliding*, as they will probably disgust you by doing, and slowly, with careful selection, getting a little shorter and shorter as the years go by. It was this work that tired me out. It is going to take a great many years. Five years, or ten, will be only a "circumstance" in it.

Work C is a sort of diamond-hunting work. Most plants, besides their capacity for gradual change, show from time to time sudden and great changes in a particular seedling or a particular bud. These almost startling manifestations are called "sports." If the desired bee-clover arrives during the present generation it will be by finding and rendering permanent one of these sports. During the years I was in the work I found two sports, or plants, which I called such. One of them I lost my grip of so completely that I have nothing to show for it—couldn't be sure that it would ever have filled the bill anyway. The other one seemed to be pretty much all one could ask, gained at one leap—but with one lamentable shortcoming. It was about as near to being *seedless* as a plant could be without being absolutely so. I never had a dozen seeds at one time.

There is also a sport which *frequently* appears in red clover, having white seeds and pure-white blossoms. I made easy progress in breeding this down to a fixt variety; but had I kept on to completion it would have been of the same use as stripes around our bees' tails, no use at all—tubes no shorter than ordinary reds.

But in fussing with the white sports I think I made a

discovery which perhaps ought to be understood and considered by all those who work in such work as this. It is, that progress tends not to go on regularly with each generation, but by regular *alternation* of generations. A little hard to describe this so a reader will catch on readily. Say you are trying to get a white variety from a white sport. First generation you raise 100 seedlings, and say 3 of them are white and 97 backslidden and red. (Think you have got a tough job before you.) Second generation, 100 seedlings pan out 50 white and only 50 backsliders. (Think you are getting on swimmingly.) Third generation you find 15 white to 85 backsliders. (Half inclined to give the thing up as impossible.) Fourth generation, however, pans out 55 white to 45 reds. And so it goes on, with regular oscillation back and forth with each generation, but on the whole manifestly getting ahead. I have come to feel that something like this affects nearly all work of the kind with seedlings.

Convention Proceedings.

Report of the Proceedings of the 31st Annual Convention of the National Bee-Keepers' Association, held at Chicago, Ill., Aug. 28, 29 and 30, 1900.

BY DR. A. B. MASON, SEC.

(Continued from page 646.)

We have the question-box, of which Mr. R. L. Taylor has charge, and will introduce it now.

Mr. Taylor—Any one who desires to disagree or to make any remark will have the privilege.

QUES.—Are the best imported Italian bees superior to home-bred Italians for honey-gathering? Are the best American-Italian bees superior to imported stock for honey-gathering?

Mr. Taylor—No. Don't be afraid of offending me, if you have anything to say.

QUES.—What does the cocoon of a larva look like?

Mr. Taylor—It is a very fine, gauzy substance, shape of the cell. If you can get hold of it properly you can pull it out and it will retain its shape; it is a very fine, semi-transparent substance.

QUES.—Can not larvæ be transferred to cups with a quill tooth-pick successfully?

Mr. Taylor—I don't know how they transfer them. I never tried to transfer them; perhaps some one here has done it, but I should not think a tooth-pick would be apt to get the cocoons out in good shape.

W. J. Lawrence—I have transferred a good many larvæ with a quill, not a tooth-pick. The quill is formed something like a tooth-pick, a little bit duller, and narrow at the end, perhaps 1-16 or 1-32 of an inch; bend that over so it comes down about ¼ inch; you can see the larva readily, and put this right under and take it out.

Mr. Taylor—That is the answer to the question. I think I read this wrong—at least I understood it wrongly. I took it that it was the transferring of the cocoon. The larva can be transferred very readily with a tooth-pick.

QUES.—Should the average honey-producer try to rear the bulk of his queens, or would it be better and cheaper for him to buy them when the price is lowest, in dozen lots, of good breeders?

Mr. Taylor—Rear your own queens; it doesn't pay to buy them, except perhaps now and then one for breeding purposes when you know you can get a good one. You can rear just as good queens as you can buy—no question about it. I have bought \$6 queens, and queens that my bees have reared under the swarming-impulse were just as good.

QUES.—Should a large honey-producer engage in raising Belgian hares, poultry or fruit, or some other side line? If not, why not?

Mr. Taylor—He should if he wants to.

QUES.—Why do bees make honey when dark bees of the same stock make dark honey?

Mr. Taylor—Why, they don't.

Dr. Mason—I don't believe the one who asked the question asked it as he wished to have it asked. I presume it is the same one who asked me this morning, Why is it that one

colony of bees owned by one person gathers white honey while another colony of bees owned by another person a block away gathers dark honey?

Mr. Taylor—They get the honey from different sources, that is all there is about it; bees don't make honey, they gather it.

QUES.—Can a bee-keeper afford to take time to sit down while working over a hive?

Mr. Taylor—He can't afford to stand up; he can't, unless he has a cast-iron hinge in his back. If he has the hive raised up it would be all right to stand up; but I have found it dangerous to stand up if you have to stoop.

QUES.—Can gloves be worn to advantage by a practical bee-keeper in the handling of his bees?

Mr. Taylor—No; you can take the sting out quicker than you can put on your gloves.

Dr. Mason—I would like to say sometimes, especially in early spring and in the fall, they can be worn with practical benefit. The gloves are easily put on, and then there are no stings to take out.

Mr. Taylor—I am giving my opinion now.

Dr. Mason—I am giving what I know.

QUES.—In gathering pollen do bees use their tongues in connection with their legs?

Mr. Taylor—I don't think they do for gathering pollen. They may moisten the pollen to some extent by the use of the tongue, but if you watch a bee as it is getting pollen, say from the blossom of the willow, it gets right into it and scrapes it, and gets it on and pokes it back and works it together with its legs. Of course, bees sometimes gather a little pollen with the tongue, but that generally gets into the honey, and I think that sometimes is the means of our bad wintering. I prophesy in a good many sections we will lose a good many bees the coming winter, for the reason that a good many fall flowers are yielding nectar, and bees are gathering a good deal of pollen from them, and a good deal of pollen will go into the honey, and the honey will not be very well evaporated.

HOW OFTEN TO EXAMINE COLONIES.

QUES.—How often should one examine the hives and bees?

Mr. Taylor—I understand the answer to that is, as often as they need it; but I suppose the questioner means how often do they need it. Well, I don't think they need it very often, if one has some experience in the handling of bees. A person who has kept bees and uses his powers of observation can tell by going thru the yard pretty nearly correct whether a hive needs any looking into. Some years I don't take out a frame from my hives to exceed one out of 20 hives; that is, at that rate, it would take me 20 years to have opened all my colonies and taken out the frames; but my hive has this advantage—it is in sections, and I can open the sections; can lift one end of one section and see what is in the center of the brood-nest without disturbing the frames. Sometimes, if your bees are not in good condition in the spring, it may be necessary to go over them two or three times, and examine those that are in bad condition, and see that they are helped all that it is possible to help them.

Mrs. Gear—Does it do any harm to open a hive and look at the bees when they are gathering honey? Does it disturb them?

Mr. Taylor—No, I don't think it does any harm at all if the weather is sufficiently warm, if one handles them carefully. I think of the two, in the spring it is a slight advantage because it excites the bees, and they will deposit a little more honey while they are being excited than they would otherwise.

Pres. Root—I was going to say there is an opportunity presented to ask questions. Mr. Taylor is right here to answer them.

TOO MUCH SMOKE AFFECTS THE HONEY.

A. F. Morley—Does it do any harm to use much smoke? Does it injure the bees in any way, or the honey?

Mr. Taylor—If there is very much smoke used it may flavor the honey for the time, but I don't think there is any material danger in it.

Mr. Poppleton—The first year I went to Cuba I shipped a large quantity of honey—some 40,000 pounds—to Mr. Muth, of Cincinnati, for sale. It was extracted by Mr. Osburn. His method of extracting honey was to have the smoke pump against the frame all the time, not to shake the bees, to brush them, and use an enormous quantity of smoke. Mr. Muth afterwards told me that all the honey tasted of smoke.

TOBACCO-SMOKE FOR INTRODUCING QUEENS.

QUES.—Has any one introduced queens by the use of tobacco-smoke? If so, with what success?

Mr. Taylor—I never tried it. Does any one here know anything about it? Has any one used tobacco-smoke for the purpose of introducing queens?

Dr. Mason—No one here who uses tobacco?

Mr. Taylor—Tobacco-smoke we are talking about.

Dr. Mason—It takes tobacco and a man to make tobacco-smoke.

UNITING COLONIES.

QUES.—I want to keep not more than 30 colonies. Could I cull out the poorest in excess of that by sulphuring this fall, and then keep the combs with the honey, and have swarms on them next season?

Mr. Taylor—You could do so, but I would not.

Dr. Mason—What should be done?

Mr. Taylor—I would prefer to unite weak colonies, but would not make too strong colonies. I don't think it is best to have too strong a colony. In the fall I would manage to get rid of the old bees. Take the hive away when they are flying, or when they are gathering honey, and leave them out in the cold and then unite the younger bees, and in that way you probably will have better colonies for standing the winter. Mr. Poppleton will have something to say on that. I see he shakes his head. I would not keep honey in combs for the purpose of giving them to swarms. Your honey will more or less deteriorate, will generally become more or less candied, and, more than that, it will be carried more or less into the sections or into the honey that is being gathered in the honey season the next year, which will probably have a bad effect upon it. Save what combs you need with honey to have your bees well supplied with honey in the spring while they are breeding, before the honey season comes on, and extract the rest in the fall as soon as you can after you take it off the hive.

Mr. Poppleton—I used to practice in Iowa exactly as that question suggests. In destroying the bees I followed a little different plan from Mr. Taylor's. Instead of uniting the bees, I simply took out the brood-combs of the colonies I wanted to destroy and changed them over. This uniting was never done during the honey season. We suggested doing it while they were after honey. This uniting doesn't want to be done until after the honey is all gone.

Mr. Taylor—What I meant by their being out after honey, was not that this uniting was to be done during any gathering of surplus, but after that was closed bees still go out and gather a little.

Mr. Kretschmer—We usually set the hive in a new location; take the combs, shake all the bees off, the young bees will enter the hive and not leave it, and the old bees will return to the old location. You will be surprised at the number of young bees, or the bees you have in the spring that will unite. Young bees never fight; they will unite peaceably and remain there; then you may select the old that you desire to save. By this means of saving the young only, gives good, strong colonies for spring use, separating the old bees from the young.

Mr. Taylor—The plan Mr. Kretschmer suggests is substantially the one that I mentioned.

FUMIGATING COMBS.

QUES.—What is the best method of sulphuring?

Mr. Taylor—If you must sulphur, I think the best way would be to put an empty hive on top of the open hive, and set in the empty hive an iron vessel with a little sulphur in it; then put in a piece of red-hot iron with the sulphur, and close your hive, and the sulphur will do the rest.

Dr. Mason—I had occasion to do a little sulphuring recently. I disposed of some of my bees, and had a large number of super-combs for use, and I noticed the other day, just before I came to this convention, that the worms were getting into them. I piled the hives with combs on top of each other, and put an empty hive on top. In that I put a basin with some dirt in it. I had made some sulphur matches by melting sulphur, and while it was melted I drew strips of old cotton cloth, about two inches wide, thru it, and wound the sulphured rags around short pieces of narrow shingles. You will need about two in a pile of a dozen hives. I stuck the stick up in the dirt; set the sulphured rags on fire at the top end, and put on the cover. It will do all there is to be done. It will kill the worms every time.

Mr. Kretschmer—Why not use bi-sulphide of carbon?

Dr. Mason—Sometimes it blows up, and might blow the bee-keeper up; sulphur won't do that.

Mrs. Acklin—I think sulphuring bees is a cruel thing to do. I don't think people ought to rear any more bees than they want.

Pres. Root—I think the question refers more to sulphuring of combs and killing worms.

Dr. Mason—I would not sulphur bees; they are worth too much.

Mr. Taylor—There is another question with reference to combs: What would be the best method of keeping combs until swarming-time next season?

Mr. Taylor—In this climate, wherever it freezes hard, you can keep the combs safely during the winter in a place where the temperature is low. Moths don't stand the low temperature. In the spring the combs will be entirely free of them. If you still keep them closed tightly they will be perfectly safe; or if you can't do that, if you keep them in a cold cellar they will keep all right, so far as moths are concerned; if they are hung an inch apart in the light where the air circulates they will be comparatively safe for a year or two; but insects soon infest them in that way.

Mr. Benton—It seems to me that we want something to protect combs that will operate all the while. Objection was made to bisulphide of carbon; that can be used with a little care if you have a big room or shed where the hives may be packed up there on top of each other. Have a shallow tin on top with a little of that, and it will operate for weeks and save a great deal of trouble. You simply have to lift off the top cover and put in a little more bisulphide when evaporated. It is only dangerous if you bring fire near it. If set away in that fashion combs ought to be kept all summer.

Mr. Kretschmer—Why not pile the hives in the apiary, five or six high; then there is no more danger about it than to have matches in the house, not one particle of danger, using proper care. I admit the fumes are readily ignited if confined in a place; so is gasoline, but bi-sulphide of carbon can be used safely if used with proper care.

Mr. Abbott—I will give you the benefit of a little experience I got in the patent-medicine business. You can stack your hives up out in the yard and put the empty hives at the bottom, instead of on top, just as Mr. Kretschmer said. You need not use bisulphide of carbon; you can use the preparation I will give you. You can't set your hive a-fire with it. Here is the recipe: Take two parts of sulphur; nitrate of soda one part; black oxide of manganese one part, and mix them together, and have your preparation ready when you want to fumigate. I don't care if there are 20 hives, put about a big spoonful of that into a wooden dish if you want to, and you can't set the dish a-fire. The fumes generated by burning will put it out. That will burn readily by putting a match to it. It will burn quick. The nitrate of soda is very inflammable, and the black oxide of manganese generates oxygen sufficient to feed the fire; the sulphur fumes consume the oxygen. A spoonful of that put into an empty hive below 20 hives will not only make fumes that will kill the worms, but will stay two or three weeks if the hives are air-tight, and you don't have to do it two or three times in the season. While I am on my feet I want to say, if you people who keep poultry will put a pound of that in your poultry-house during the summer, and get your poultry-house thoroly sprinkled before you do it so the water will permeate the cracks and crevices, which will enable the water to absorb the fumes readily, you will kill every louse without any trouble.

Dr. Mason—I would like to ask, What is the object of putting the empty hives at the bottom?

Mr. Abbott—Because the fumes go up better than they go down.

QUES.—Do you make the colonies queenless 48 hours before introducing the new queen?

Mr. Taylor—Well, that depends; if honey is coming in during the honey season, you can introduce the queen almost any time, almost immediately. I have introduced a good many this year—just threw them in. When honey comes in rapidly the bees will take any queen; there is no trouble about it. I remember one time when I handled the bees a good deal more than I do now during the honey season, I was taking off some combs to extract, and I had the bees out on the ground in front of the hive, and they were scattered around; when I got thru and the bees got back, I saw they were greatly agitated. I surmised the queen was gone, and I lookt around and found I had stept on her. I happened to have an extra one, and I put her down among the bees, and they crowded around her and were just as pleased to see her as tho she was their own; it didn't make a bit of difference. In the spring you can do the same thing. When they are anxious to build up, they are anxious for a

queen, and they will frequently take a queen at once. But a person needs some experience to do that. A person who has tried to introduce queens can tell at once whether the bees will accept a queen. Without that experience you sometimes make a mistake.

Mr. Hershisier—I would like to refer to the first question—Are best American Italians superior to imported Italians? What was the answer to that?

Mr. Taylor—I don't think it reads so. The question is, "Are the best American-Italian bees superior to imported stock?" I think I said no, but I didn't comprehend the question fully. I don't think there is any difference.

Mr. Hershisier—I didn't think you comprehended it. What is the difference between imported Italians and American Italians?

Mr. Taylor—I don't know as there is any difference, except we select them to get color, and perhaps they are a little lighter.

Mr. Hershisier—If the imported ones were better I think that would be the best way of improving stock. I think American breeders are doing more towards improving stock than foreigners are.

Mr. Rankin—I would like to say a word with reference to this bisulphide of carbon; it is a deadly poison. It will kill woodchucks and men, and it is well to handle it with a great deal of care.

Mr. Taylor—It won't kill a woodchuck unless it is shut up with him pretty tight—same way with men.

QUES.—I would like to know what is the matter with the frame of brood on the platform?

Mr. Taylor—I think it is pickled brood, but I may be wrong. It seems to be that according to the opinion of many in the room. If any of you want to know what pickled brood is, look at this comb.

The convention then adjourned to 1:30 p.m.

(Continued next week.)

Contributed Articles.

Water for Bees and Brood-Rearing—A Reply.

BY PROF. A. J. COOK.

IT is always pleasant to have Mr. G. M. Doolittle as a critic. He is always candid, and never flippant. He has had a wide observation, and does a good deal of thinking. Therefore, any opinion that he may have is never to be dismissed without full consideration.

I have carefully reread my article, page 482, and should wish to change very little were I to rewrite it. In one or two places I should be a little more explicit were I to write the article again.

Mr. Doolittle claims, and with much show of reason, that the main use served by water in the economy of the hive is to form a part of the food fed to the brood. His two reasons for this opinion are as follows: First, water is gathered very rapidly when the bees are rapidly building up, and this irrespective of activity in the field; secondly, the weight of the brood can only be accounted for in that water is given abundantly to the brood. I am not at all certain that Mr. Doolittle's first proposition is true, tho I am sure it would generally be so. I feel very certain that the latter is not true. Mr. Doolittle and all bee-keepers know that bees frequently continue breeding for days without gathering any water at all. Certainly, then, water can not be directly requisite for the production of brood.

As I stated in my previous article on this subject, water serves the animal in three ways, as follows: First, it helps form the tissues themselves; second, it aids the processes, as, for instance, the keeping of substances in solution so that they can be used in the body; thirdly, it serves in cooling off the animal body. This last is mechanical, as the cooling comes from the act of evaporation. We see, then, that bees take water as they do all other food, to help build up their tissues, and also to aid the processes. Secretions, then, could not be formed except as water is taken as part of the food. I believe that it may be shown, some day, that the so-called chyle is largely digested pollen to which, very likely, honey may be added. The precise origin and nature of the food fed to the drones, queens, and larvæ by the nurse-bees is not yet fully determined. That some honey may

pass into the true stomach and there mix with the digested pollen is not improbable. I feel very certain that no water does pass directly into the stomach as a component part of this larval food. I believe that it is all absorbed, passing into the blood and, of course, indirectly aids in digestion, and so is important in all the work of the bee. In all animals, water is very quickly absorbed when it is taken into the alimentary canal, and I believe with bees, as with higher animals, that it speedily passes to the blood and so promotes secretion and excretion.

I do not suppose that perspiration on the outside among bees is at all active. The chitinous cover of bees would serve to greatly lessen perspiration from the outside surface of the body. Thus, it is probable that what we might call skin perspiration is very slight. Possibly it does not exist at all. But we must remember that the skin of bees is reflex, and lines all the great network of breathing-tubes. These breathing-tubes come in close apposition with the blood. That water from the blood is constantly and rapidly passing to the air in the breathing-tubes or trachea, is certainly true. This is purely analogous to perspiration, as the water is constantly passing from the blood and cools the body. Of course, this water passes out with the air, always bearing its load of heat with it. It goes without saying that neither Mr. Doolittle nor I ever saw this "sweating." It is entirely out of sight. There is no question but that the bee must cool off. It is as active as the higher animals, and all animal activity genders heat. This heat would soon destroy life were it not carried away. I still believe, despite Mr. Doolittle's kindly criticism, that a very important function of the water taken by bees is to secure this cooling-off process.

Mr. Doolittle remarks upon the sticky moisture that we always find when bees are suffocated in the hive. Of course, any honey that is incorporated in this moisture is regurgitated by the bees. I do not state that there may not be a good deal of this honey. I believe as strongly that very much is water which passes from the bees in their attempt to cool off their bodies. Does Mr. Doolittle know that this is not the case?

Mr. Doolittle's weight of brood I think is no argument in this case. The brood is not made up of water, but of tissue like all larval insects. I do not think the brood contains any more water than do other larvae, yet many larvae surely get no water at all in their food except in combination. This is true of all the borers.

To recapitulate: Bees need water as food to build up their bodies, to aid in performing their functions, hence, in producing the food of their young and in counteracting the heat produced by vital action. It is probable that this water all goes to the blood, and not directly into the food given to the larvae. I do not believe that in the general economy of the body the processes are greatly different with bees from those of higher animals. If not, then surely the cooling-off process which comes thru evaporation of water—we might call it respiratory sweating—is of exceeding importance.

I am very glad Mr. Doolittle wrote his critique, and I hope others will do so if they feel that they have good and substantial reason for doubting these propositions. The processes in the animal economy are so complicated that none of us can afford to be dogmatic. We only want to get at the truth, and there is no such good way as by friendly criticism.

Los Angeles Co., Calif.



Finding Queens—Experiences in Introducing, Etc.

BY EDWIN BEVINS.

KILLING old and other undesirable queens, and introducing young ones in their places, has been my chief occupation for several days. Much has been written lately on the subject of finding queens, and judging from the remarks of some, they seem to consider it a formidable task. I have not found it so. My method is as follows:

I first get an empty hive and fasten a swarm-guard at the entrance. Then I smoke the bees to be operated on, and set the hive to one side. Then I place the empty hive where the one removed stood. Then I adjust a wide board so that its upper side shall be on a level with the upper side of the alighting-board. Then I place two short pieces of 2x4 on the wide board, so that one end of each piece shall connect with one side of the hive. These pieces of 2x4 direct the bees to the entrance, and prevent the queen from crawling off to one side, as she sometimes will if there are no obstructions. Then I smoke the bees a little

more at the top, and proceed to take the frames out one by one, and shake the bees all off in front of the empty hive.

If time presses, I do not look on the combs for the queen at all. If not, I give them a few hasty glances. The combs as fast as shaken are put into the hive, and the bees soon cover them. The bees that have clung to the sides and bottom of the old hive are brushed down in front of the new hive, so there is practically no chance to miss the queen. I never miss finding her outside, and sometimes while there are a good many bees outside with her. The time consumed is less than the time spent in telling how it is done.

The queen I got from Dr. Miller was introduced safely, but it took a long time to do it. She was received on Tuesday, and put in a hive with bees taken from above a queen-excluder, and confined to the hive by means of wire-screen. This confinement was continued for only about 48 hours. By Dr. Miller's advice I left the pasteboard over the candy. On the Friday following the Tuesday when the queen was received, the bees had not attacked the pasteboard at all, and I had it removed. Then the bees were left unmolested till the following Tuesday or Wednesday, when I had an examination made, and found the queen still in the cage. I told the person making the examination to take a small stick and punch a hole thru the candy. He did so, and a day or two after being able to get around myself, I looked and found the queen on one of the combs.

I was not so fortunate with another queen I received from Alabama a day or two after Dr. Miller's came. The candy had been eaten into to a considerable depth, and fearing the bees might release the queen too soon, I tacked a piece of pasteboard so as partly to cover the hole that admits to the candy. After two days the pasteboard had not been touched, and it was removed. Examining again at the end of five days after the cage was placed on the frames, I found the queen and her escort dead in the cage. The bees had not tried to release her. Whether the pasteboard had any part in the loss of this queen I will not venture to say. I am inclined to believe, however, that my bees do not like pasteboard.

The season here has been almost a failure so far as surplus honey is concerned. Most of my colonies have enough for winter. A few will have to be fed. I made some nuclei and reared some queens for them in August, and I shall do a good deal of doubling up, partly to save stores and partly to get rid of some undesirable queens. A nucleus with a young queen will be united with an old colony having considerable honey, but whose queen was past her usefulness. Decatur Co., Iowa, Sept. 28.



A Visit to Some Kane Co., Ill., Bee-Keepers.

BY THE EDITOR.

SEPTEMBER 19th we accompanied the Prohibition Special Train (which carried candidates Woolley and Metcalf, with others) as far as Aurora, Ill., expecting to spend the day among bee-keepers in and near that city.

Mr. W. H. Norris, one of the bee-keepers, met us at the depot, he having come to see the special train arrive, and hear the speakers. He took us "under his wing," and



Mr. F. L. Taylor and Apiary.



Mr. John Divekey and Apiary.

after a sumptuous dinner at his elegant home, hitcht up his speed-away horse, and took us to visit a few of the bee-keepers in that locality. The honey crop the past season had been only about a quarter the usual amount, the principal source being sweet clover, we believe.

We first called on Mr. John Mareth, who has a very nice yard of some 80 colonies. He runs principally for comb honey. Mr. Mareth is a pleasant young man, working in the shops as a foundry-man, so he has but little time to devote to his bees. Still, he is making a success with them, as he well deserves to do.

Mr. John Divekey was the next "victim" we saw, a picture of whose apiary is here presented, and is the oldest bee-keeper in the place. He is contentedly sitting on one of the hives.

He was born in Germany, and there commenced handling bees when 10 years of age, using at that time the old straw hive. He came to his present place in 1857, and in 1858 built the comfortable home that he now lives in. At the rear is a large lot that extends to the river, on which he has kept bees for 42 years. Tho he has held the position of foreman of the coach department of the C. B. & Q. railroad shop all these years, his spare time has always been spent with the bees, and none in that locality has had a longer or more practical apiarian experience than he. At times he has had as many as 225 colonies.

Mr. Divekey was the first bee-keeper there to import and introduce the Italian bees, in the days when the introducing of queens in box-hives was an entirely different process from the operation in the dovetailed hive of to-day. Tho many years have past over his head, he still has the same interest in his bees, and works with them with even more pleasure than he did 40 years ago. With his quiet, homelike disposition, Mr. Divekey is always ready to tell of his experiences, and to impart his information to those less informed.

Last spring he had 40 colonies, and now has 90, all in first-class condition. He expects to kill about one-half the number this fall, and extract the honey from them, keeping the empty hives with full combs for the new swarms next season, considering them of great benefit to the new swarms each year. Aside from his extracting he works entirely for comb honey, and reports about an average crop. He is using the new 8-frame dovetailed hives with fence supers, believing them the best he has ever used. Bee-keeping has been to him, these many years, a "side line" of pleasure and profit—a pleasure because of the success he has made, and a profit because of the assistance it has been to him in gaining his very comfortable financial circumstances.

Mr. F. L. Taylor is another bee-keeper who lives quite near to Mr. Norris. By the way, Mr. Norris has a very small apiary at present which he expects to increase another year. He now spends most of his time in looking after his extensive property interests.

Mr. Taylor has kept bees in his present locality about

eight years. He works much on the same plan as Mr. Divekey, tho he prefers and uses 10-frame hives, using the T super. He thinks the 8-frame hive is all right if it is lookt after often, and the colonies fed when necessary, tho he can see nothing gained, and is very certain the bees in 10-frame hives will get along with less attention, and are pretty sure to have enough to eat, and make a larger and stronger colony.

Mr. Taylor is in the jewelry business, but his greatest pleasure is the bees. He introduced six 3-banded Italian queens in July, 1899, and three golden Italian queens. All are doing well, as all were successfully introduced. He thinks the 3-banded Italian queens better layers than the golden, tho the golden colonies are very strong.

Mr. Taylor has 22 colonies now, and does not expect to keep over 30, as he is on the river bank in the center of a city of 22,000, and not over three blocks (in a direct line) from the post-office, city hall, etc. We take pleasure in showing a picture of Mr. Taylor's neat apiary, which is just at the rear of his jewelry shop. The gentleman in the picture, apparently drest like a Chinaman, is the jovial owner.

We also met Mr. Sylvester, who has 25 or 30 colonies. He is a contractor and builder, and has little time to devote to his bees.

We returned to Chicago after spending a few very pleasant hours among the bee-keepers mentioned.



Eighteen Years' Experience with Bees.

BY A. MOTTAZ.

I FIRST started with a stray swarm that I caught. Then I got "Langstroth on the Honey-Bee," "A B C of Bee-Culture," and some minor books, and subscribed for *Gleanings in Bee-Culture* and the *American Bee Journal*. I increast my bees slowly, aiming for extracted honey rather than increase. Tho my winter losses have been light (except winter before last, when I lost 50 percent in one apiary), my increase has been from bought bees. Timely and careful spring and early summer management does prevent swarming for me. I now have 140 colonies in five different apiaries, spread 10 miles apart, or between extremes, mostly in 10-frame Simplicity hives, tho some are in 2-story chaff hives, and some in new 8-frame dovetailed chaff hives, with two half stories, one for extracting and one for comb honey. I have not had them long enough to express any opinion on them. I have serious doubt if there is any hive better for extracting than the regular 10-frame Simplicity, tiering as necessary, having at least enough of them and combs, or foundation, to tier three high.

I handle my combs in the hives. I have a high wheelbarrow, with corn cultivator wheel, and legs high enough so that it will just clear the grass or rubbish when I stand. The barrow consists of only the frame, being as light as possible consistent with the strength necessary to carry all I can wheel.

I have adopted the castor-wheel platform for two hives, which I lay loose on the barrow frame, projecting two or three inches to one side, so as to rest that side on the table in the honey-house as I wheel in, then it is the easiest thing for me and my assistant to take hold of each of the other corners and roll the platform on the table, which is made just high enough so that it is on a level with the barrow, just wide enough to hold the platform lengthwise, and long enough to hold the two platforms, the one empty and the full one.

I have an extracting-house 15x8x6 feet, on iron truck wheels 28 and 32 inches high. It has a door behind; two single sash windows at opposite sides, and one in front, all provided with removable sash and wire screen with bee-escapes; round roof, railroad-car fashion; floor of fencing drest and matcht on foundation like a hay-rack, only more crosspieces; side and roof frame 2x2 inches, and $\frac{1}{2}$ inch boards 6 or 8 inches wide. It is lined all around inside with sheeting, to close all cracks. The roof is double, with building-paper between. The whole thing ready to work with driver in, weighs 3,300 pounds. I haul it as near to the apiary as possible. I have for the horses a pair of covers extending all over the head and nose, and also a rope 100 feet long with hooks at both ends to pull away a distance, if bees are very bad. We have done one extracting, and are much pleased with it.

I use duck sheets on the hives, and they work nicely to flap in smoke to drive down the bees. I leave one end sticking to the hive, raise one end, blow a puff of smoke to

the other end, then flap in the smoke. If there are two supers, the top one full, it works very well.

Tho I have all the necessary implements to make it, I prefer to buy all my comb foundation from extensive manufacturers; so also as to queens. I believe it pays me to buy of experienced and reliable breeders, except perhaps it is well to rear a few from one's best stock, to have on hand for emergencies.

I have made a very satisfactory wax-rendering tank, as per directions given by some one in the bee-papers. It is 3x4 feet, 16 inches deep, made of 2-inch plank, with galvanized sheet-iron bottom, set on bricks on edge, and of a convenient height for a roomy fire-place underneath. A wire sieve is made to slip in from the top, and is wedged down so I can dip the melted wax from the top. I believe it is an unexcelled way.

I had a long siege of foul brood 10 years ago. I failed with spraying salicylic acid, but cured by transferring bees on foundation and clean hives. I boiled hives, melted combs for wax, extracted, boiled and fed infected honey, all successfully. Some years later I bought the disease again with bees, but got rid of it promptly the same way as before.

Except winter before last, I have wintered bees successfully both in the cellar and outside in chaff hives, and some in Simplicity hives, protected by straw in movable sheds.

I have gradually created a good market for extracted honey in pint jars to grocers, and 1, 2 and 4 quart pails to families. It has been an up-hill and persistent work. I now supply from 80 to 100 grocers in some 10 different towns or cities, and dispose of 5,000 or 6,000 pounds yearly. I found it necessary until now to sell either for cash down or on commission, in order to introduce both myself and the honey, and overcome the prejudice against it. Now I am doing away with the time plan.

I hereby wish to thank the many contributors to our papers whose kinks I have appropriated, and that have been such helps. That is my main object in reading the bee-papers. I think best to adopt and apply the experiences of others, as I see their practicability, rather than try to originate very much myself. La Salle Co., Ill.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Uniting Weak Colonies.

I have three weak colonies; please tell me plainly how to unite them for winter. NEW YORK.

ANSWER.—Follow any of the plans laid down in your text-book, and you will be pretty sure of success. But bees do not always act alike, and sometimes there will be fighting with the best of plans. In such case a good smoking helps to make them behave. Here is one good plan: Kill the queen of one of the colonies two or three days before the time of uniting. Call this colony No. 1, and the other in which the queen is left No. 2. Two or three days after killing the queen of No. 1, bring it near No. 2. Set No. 2 off the stand and put an empty hive in its place. Now take alternately from the two hives frames of brood or honey with adhering bees—first from one, then from the other—and set in the new hive. The excess combs must of course be removed after the bees are brushed from them.

Transferring and Feeding Bees.

About two weeks ago I bought 20 box-hives of bees and transferred them to 10-frame hives, and had 6 frames extra, mixt with brood and honey, but I was afraid they would not winter on 6 frames. I bought 20 colonies in 8-frame hives, thinking that I would take one frame each from the last 20 and put into the first 20; but I find that the last 20 are not any better off than those I got from the box-hives. It seems that those in 8-frame hives are about 4 years old, and perhaps older; the brood-chamber is solid with old brood-comb

with about an inch or two of honey at the top. There was no space at the end of the frames, and I had to knock the hive to pieces to get them out. The brood-combs had separated about an inch from the top. The last 20 I got I am to return the hives when they are empty, so I transferred two into my hives.

1. What I wish to know is, can I leave them until spring, and if they swarm put the swarm into a new hive and then destroy the old brood-combs and return the old hives? Or, could I put an 8-frame super on and let them fill up, then after awhile divide and put the queen in? Or, kill the old queen and send and get a young one? Thinking you might know of a better way to get them out without going to the trouble of fastening all those old brood-combs to Hoffman frames, is why I ask. If I don't transfer them now, will they swarm in the spring?

2. I will have to feed those that I transferred. How often should they be fed? Which is the best feeder? How much water to sugar should I use? CALIFORNIA.

ANSWERS.—1. Yes, it is an excellent plan to leave the bees in the old hive till they swarm next year, then 21 days after swarming there will be no worker-brood in the hive, when you can drum out the remaining bees and dispose of the comb as you see fit. If the hives are not unusually large, the colonies in them stand as good a chance of swarming as any bees. If the season is fair, and if no surplus room is given, they will be pretty sure to swarm.

2. Once feeding is enough, if plenty is given. Root's "A B C of Bee-Culture" gives the preference to the Miller feeder for fall feeding.

Uniting Bees—Causes of Swarming.

I read all the bee-books, and still I don't understand some things, and therefore know of no way to find out but to consult the best authority.

Why is it that I invariably fail in my attempts to unite two colonies, as they go to fighting, after following all the directions laid down by yourself and others? To illustrate more fully: A few days ago (Sept. 28) I discovered a swarm of bees flying around my apiary. I don't know where they came from. After they clustered I took a second super from a hive I had on for feeding up a colony. I hived them in this super, carried them to the hive the super came from, and after placing a piece of wire-cloth over the first super left on the hive, I placed these wandering bees on this hive over the wire-cloth about dark. The next morning I found many dead bees in front. These I think were those that took wing from the ones I had lately hived.

Then I concluded to try a new plan. After removing the wire-cloth, I left a passage or entrance for the new bees by raising the top a little so they could come in and out without going thru the lower hive of bees.

I neglected to say at the proper place that I smoked the hive of bees before putting on the new bees, but could not smoke the bees I had just hived because they, being in a shallow super, would almost all take wing.

After leaving this entrance and removing the wire-cloth, I don't think they have fought any more up to date, (Sept. 30th.)

1. Now I wish to ask, What do you think of my plan of uniting? I will leave open the passage at the top for a few days longer until everything seems peaceable, when I expect to add the third super in which to feed, and then close the top. If you approve of my plan, how long before you would close the top or extra entrance? Remember, I was feeding the bees originally in this hive for winter, and as they were my weakest colony I chose to unite the strong bees with them. I neglected to say, also, that when I was hiving these bees I very carefully looked for the queen, but saw none, altho they were a good-size colony.

2. Is there any other cause for bees swarming at this season of the year, besides starvation? Several swarms have past along lately, like they do in the spring.

I will say in conclusion that I read of apiarists uniting bees as a very frequent and simple thing, but it doesn't work that way for me. For instance, they speak of uniting nuclei in the fall, as a plain, easy-going thing. They speak of taking frames of brood with the bees clinging to them, from different hives, and forming a new colony, and never speak of the bees fighting. It must be I have fighting bees that won't unite. MISSISSIPPI.

ANSWERS.—1. I am a little in the condition you are after you have read the text-books. After reading your question there are points not clear. As I understand it,

when you first put on the super of strange bees, there was no passage from the super directly into the open air, but it is not stated whether there was any passage from the super thru the wire-cloth to the space below. If there was none, and the bees were completely imprisoned, there certainly could be no fighting. If part of the bees of the swarm were not secured in the super, and entered the hive thru the regular entrance, they would pretty surely be killed. That could hardly be considered failure on your part, for it would simply be some stray bees entering a wrong hive. Then (if I understand correctly) you took away the wire-cloth and allowed the bees in the super a passage into the open air. The fact that there was no fighting is proof that the scheme as a whole was a success. But if I have made the right suppositions you are not to take it for granted that your second attempt was a success independent of the first. The bees had some time to get acquainted before the wire-cloth was taken away. It would have been as well, possibly better, if the outside entrance had been allowed from the start.

The time for closing the upper outside entrance is merely a matter of your own convenience. It can be done any time after 3 or 4 days, or later.

It is not a bad thing that you have learned that there may be difficulty in uniting. Many a one has puzzled over a failure after a number of successes. Next June, you may take a frame of brood and bees from any colony and give it to any other colony with scarcely a chance of any fighting, and you may keep it up all summer, but in the fall, after all gathering has ceased, it's another story. Then you may count on fighting unless you take special precaution. One good way is this: Set an empty hive on the stand where you want the united colony to remain, and this will be usually on the stand of the stronger colony, the weaker having been unqueened 2 or 3 days before. Now take a frame from one of the hives, shake down the bees in front of the empty hive, and put the frame in the empty hive. Then do the same thing with a frame from the other hive, and thus proceed alternately until all have been used. Of course the surplus frames must be taken away after shaking or brushing the bees from them. After the first frame has its bees shaken down close to the hive, the remaining bees should be shaken down a foot or so farther from the hive.

2. Yes, bees sometimes swarm regularly quite out of season, when it is by no means a case of starvation. It is not easy to account for all the freaks of bees.

Wintering Bees in a Damp Cellar.

Last winter, in New York, I wintered 12 colonies in a dark cellar, in which the temperature would often go down to 35 degrees. The bees were in 8-frame dovetailed hives with covers sealed down, and on deep bottom-boards. Many of the hives became very damp and moldy, and water ran out of the entrance of every hive. They wintered poorly, but all came thru alive. I expect to winter them there again this winter. Would it not be better to leave the bottom-boards off, and put some absorbent like burlap under the cover?

SUBSCRIBER.

ANSWER.—It is doubtful that any gain would be made by removing bottom-boards that are deep enough to allow an entrance of $1\frac{1}{2}$ to 2 inches. Possibly there might be a gain by having some absorbent under the cover; but anything of that kind to allow a freer passage of air would make the hives cooler, and they are too cool already. If the temperature often goes down to 35 degrees, the thing to strive for is to have the cellar warmer. Can you not bank the cellar with some kind of banking that will raise the temperature several degrees? A fire in a stove in the cellar would make all right, but it might not pay with only 12 colonies. There would be some gain upstairs, however, in having a warmer floor—an important thing—especially if there are small children in the family. In a cold spell you could carry down hot bricks or stones, or, better still, jugs of hot water. But the water must be corked tight, so no vapor can escape in the cellar.

"Chunk Honey"—Honey-Plant Illustrations.

1. I am thinking of trying to build up a trade (in a certain section) on chunk or bulk comb honey, as it is called in Texas. I want to produce this honey in the regular Langstroth brood-frame, in an upper story. Do you think the thin-super foundation would be heavy enough to put in full

sheets in this size frame without wires? If not, kindly advise me what weight foundation I would better use?

2. Does Prof. Cook's "Bee-Keepers' Guide" give any more illustrations of honey-producing plants than the "A B C of Bee-Culture"? VIRGINIA.

ANSWERS.—1. In all probability it would sag badly. If you do not care to use shallow frames, it would not be a great trouble to nail a middle bar in the Langstroth frame, which would make it all right to use thin foundation. Or, you could use the full frame without the middle bar, and use a narrow starter of thin foundation. It would hardly be advisable to use foundation heavy enough to fill a full frame, for you could hardly build up a trade with such honey. Texans prefer the term "bulk honey" to "chunk honey," altho until lately they have always called it "chunk honey."

2. A hasty count shows more in Prof. Cook's book.

The Nonsensical Sting-Trowel Theory Again.

The following paragraph was taken from the New York Tribune:

BEES.—C. M. (Winchester, N.H.)—The bee's sting, supposed to serve merely as a fighting weapon, is more frequently utilized by this insect to preserve the stored-up food. Before closing its cell the bee adds to the honey a drop of the venom of its sting, this venom containing the formic acid which prevents the honey from fermenting or getting spoiled. Thus the bee, long before Lister and Pasteur, knew the use of antiseptics.

I have never seen such a statement in any bee-book or bee-paper, and would like to know if it is the truth.

SUBSCRIBER.

ANSWER.—Yes, if you go back far enough, you will find both in book and paper the nonsensical statement made that the sting of the bee is used as a trowel to manipulate wax, and that just before the closing of each cell of honey a tiny morsel of formic acid is dropped into the cell from the sting of the bee. The Rev. Wm. F. Clarke was the originator of the idea, the only book in which it appeared being a small volume of verse written by him. He never gave any proof for the assertion, but persisted in giving the vagary of his imagination as an established fact. It seems too bad that so influential a paper as the New York Tribune should start anew such arrant nonsense.

York's Honey Calendar for 1900 is a 16-page pamphlet especially gotten up to create a demand for honey among should-be consumers. The fore part was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample free; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for \$2.00; 500 for \$3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Chicago Convention Picture is a fine one. It is nearly 8x10 inches in size, mounted on heavy cardboard 10x12 inches. It is, we believe, the largest group of bee-keepers ever taken in one picture. It is sent, postpaid, for 75 cents; or we can send the American Bee Journal one year and the picture—both for \$1.60. It would be a nice picture to frame. We have not counted them, but think there are nearly 200 bee-keepers shown.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at \$1.00.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of \$1.00 for your Bee Journal subscription a full year in advance, we will mail you a Wood Binder free—if you will mention it.

A Close and Exciting Election!

Which will be Elected?
How many Votes will he Get?

Send 25 cents for a three months' subscription to the

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CHICAGO,

and a chance in the

McKinley

Prize guessing contest
for \$5,000 in cash,

Bryan

which will be awarded to those coming the nearest to the official figures of the popular vote cast for the successful presidential candidate.

The Publishers' Guarantee Association has deposited \$5,000 in the Metropolitan National Bank, Chicago, Ill., for the purpose of paying these prizes, under strict conditions preventing its use for any other purpose.

First Grand Prize, \$2,000,

to the nearest guesser, and 197 more cash prizes to be awarded as follows:

To the nearest correct guess.....	\$2,000.00
To the second	500.00
To the third	250.00
To the next 5, \$50.00 each.....	250.00
To the next 40, \$25.00 each.....	1,000.00
To the next 50, \$10.00 each.....	500.00
To the next 100, \$5.00 each.....	500.00

198 cash prizes\$5,000.00

TO AID GUESSERS:

McKinley's popular vote in 18967,107,304
Bryan's popular vote in 1896.....6,533,088

Our Offer: We have made arrangements with the Publishers' Guarantee Association, of Chicago, to enable our subscribers and friends to participate in these great cash prizes. Every one is invited to participate, and for each three months' subscription to the Farm, Field and Fireside sent us, accompanied by 25 cents, a guess will be allowed. Those remitting 50 cents for six months' subscription will be allowed two guesses, and those remitting \$1.00 for one year's subscription will be allowed four guesses. This applies both to new subscribers and to renewals. Present subscribers can send in their guesses, accompanied by the money, and their subscription will be extended.

How to Guess: When you send in your subscription you make your guess. Be sure you write your name and address and guess as plainly as possible. As soon as we receive your subscription we will fill out and send you a certificate corresponding to guess made by you, which will entitle you to any prize that you may draw. Be sure and keep your certificate. We will file the duplicate with the Publishers' Guarantee Association. Every subscriber will receive as many certificates and have as many guesses as he sends subscriptions to Farm, Field and Fireside.

In case of a tie, or that two or more estimators are equally correct, prizes will be divided equally between them.

CUT THIS OUT AND SEND WITH YOUR SUBSCRIPTION.

My Candidate is

My Guess is

My Name is

Address.....

**This Contest
will close
November 5, 1900,**

at 6:00 p.m., and awards will be made
as soon as the official count is announced. Address,

FARM, FIELD AND FIRESIDE,

710 Masonic Temple,
CHICAGO, ILL.

Langstroth on... The Honey-Bee

Revised by Dadant—1899 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroughly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for \$1.25, or club it with the American Bee Journal for one year—both for \$1.75; or, we will mail it as a premium for sending us **THREE NEW** subscribers to the Bee Journal for one year, with \$3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.

118 Michigan Street, - CHICAGO, ILL.

BEE-SUPPLIES.

Muth's Square Glass Honey-Jars.
Send for Catalog.

HONEY AND BEESWAX WANTED.

C. H. W. WEBER,
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DITTMER'S FOUNDATION

Wholesale
and Retail

This foundation is made by an absolutely non-dipping process, thereby producing a perfectly clear and pliable foundation that retains the odor and color of beeswax, and is free from dirt.

Working wax into foundation for cash, a specialty. Write for samples and prices.

A full line of Supplies at the very lowest prices, and in any quantity. Best quality and prompt shipment. Send for large, illustrated catalog.

GUS. DITTMER, Augusta, Wis.
Beeswax Wanted.

Rocky Mountain Bee-Plant Seed!

(*Cleome integrifolia*.)

...FREE AS A PREMIUM...

The ABC of Bee-Culture says of it: "This is a beautiful plant for the flower-garden, to say nothing of the honey it produces. It grows from two to three feet in height and bears large, clusters of bright pink flowers. It grows naturally on the Rocky Mountains, and in Colorado, where it is said to furnish large quantities of honey."

We have a few pounds of this *Cleome* seed, and offer to mail a ¼-pound package as a premium for sending us **ONE NEW** subscriber to the American Bee Journal, with \$1.00; or ½ pound by mail for 40 cents.

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ROOM AT THE TOP



Recognizing that there was "room at the top," we have issued not an ordinary catalogue but the **20th Century Poultry Book**. Contains the latest and best thought on the poultry question, from the egg through all its changes, to the market. No subject missed. Written from practical experience. The world renowned **Reliable Incubators and Brooders**, used all over the U. S. and in 51 foreign countries, receive deserved attention. Book mailed anywhere for 10c. **RELIABLE INC. & BROODER CO., Box B-2 Quincy, Ill.** Please mention Bee Journal when writing.

WANTED.

Light Amber Comb Honey. Please mention quantity you have, how put up, from what flowers gathered, and what price you ask f.o.b. Chicago.

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Basswood Belt in
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M. H. WRIGHT, Greenwood, Clark Co., Wis.
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are hatched by our incubators, and more of them than hens can hatch. Why? Because our regulator never fails to keep the heat just right. Catalogue printed in 5 languages gives full descriptions, illustrations and prices, and much information for poultry raisers. Sent for 6 cents.
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FREE FOR A MONTH...

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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Be Kind to Stock

by humanely dishorning them only with the quick, smooth cutting

Convex Dishorner.

I also make the Buckner Stock Holder, one of the best aids to dishorning, and two other styles of Dishorners, one for calves. Every approved appliance for this work. Send for FREE book.
GEORGE WEBSTER, Box 153, Christiansburg, Pa.
Western trade supplied from Chicago.

Please mention Bee Journal when writing.



Bleaching Comb Honey.

Build a bleaching-house by placing posts 2x4 or 4x4 in the ground, 5 feet apart on all sides, making it 10 feet square and 7 feet high. Put on plates and roof. Build up around the bottom with lumber 2 feet high from the ground, making it bee-tight. Put in your shelves between the posts, making them 4 inches wide, and placing them 6 inches apart, one above the other. Place these shelves entirely around your bleaching-house, then cover the outside, from the lumber at the bottom to the plate, with the lightest house-lining. Seal overhead with cloth or lumber. Leave the space between the sealing and roof open so

as to keep your house as cool as possible.

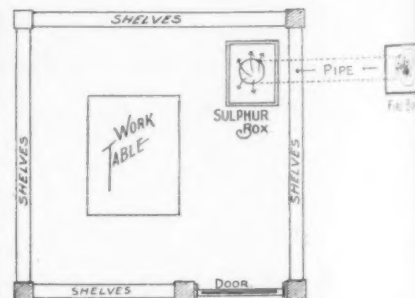
Place a screen-door in one corner, as seen in the sketch. Locate a work-table, 3x6, in the center of your bleaching-house, for cleaning and packing on.

The best way to build a sulphuring-box is to take a stovepipe 8 feet long, with an elbow at one end. Place the



pipe under ground about 8 inches deep, letting the elbow come up above ground in one corner of your bleaching-house. For the outside end of the pipe take an old coal-oil can and cut a hole in the side sufficiently large to admit the stovepipe. Cut about half of the top of the can out square to allow you to put in your sulphur and for draft; then make a box just the size of a super, but four times deeper. Place the box over the elbow on the ground, in the corner of your bleaching-house, as seen in the sketch.

We are now ready for business. When you take off full supers of honey from the hives, carry them into your bleaching-house and place on the sulphuring-box; build up ten or twelve high. Put a heaping tablespoonful of sulphur in an old tin plate or pan, and place it in the oil-can and start it to burning. In this way you get the full benefit of your sulphur, as it enters the super in every row of sections and passes from super to super. Some may ask why I have the sulphur so far from the honey. Why not put it directly over it? The reason is, I have tried that, and the consequence was I had a lot of comb honey that became hot enough to begin to settle in the sections, and also turned them dark at the bottom of the sections. To get the best results, keep your honey



as cool as possible when sulphuring. After the sulphur that you have put in your box has burned out, turn your supers upside down on your table; take out the honey and clean; and as you clean place on the shelves side by side, the honey facing the outside. Let it remain about 24 hours in daylight, then reverse, putting the other side of the section out to the light. When my

The Bee-Keeper's Guide

Or, Manual of the Apiary,

—BY—
PROF. A. J. COOK.

460 Pages—16th (1899) Edition—18th Thousand—\$1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without THE BEE-KEEPER'S GUIDE.

This 16th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to GIVE AWAY to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, \$2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,

330 Market Street, SAN FRANCISCO, CAL.

shelves are pretty well filled I go over it every morning before the sun is up, reverse, and pick out what is sufficiently white. When the sun is shining it all looks white when it is not.

Pack as you take from the shelves. Care should be taken that the sun does not shine too hot on your bleaching-house during a hot day, or you will have a lot of honey settling down in the sections and dropping out. When the weather is cool the sun does no harm. In hot weather I use an awning on the sides that the sun shines on, about four feet wide, sufficient to break the heat of the sun from the shelves. It is not the heat of the sun that you want. It is the sulphuring and the light that do the work. After comb honey has remained on the shelves three days, and is not sufficiently white, place in supers and sulphur, and place on the shelves again. You will find that you can bleach the darkest comb. Any foreign matter that is on the comb will not bleach. I commenced the bleaching of comb honey several years ago, and there are but five others in the State, up to the present time, who have adopted it.—L. J. CROMBIE, of San Diego Co., Calif., in Gleanings in Bee-Culture.



Fine Season—Eastern Oklahoma.

Bees have done fine here this season, mine averaging 66 pounds of comb honey per colony, spring count. I have sold the increase in colonies to people who are tired of paying me 20 cents per pound for honey.

People said I was foolish to invest money in bees, hives, and bee-papers,

DR. PEIRO,

34 Central Music Hall, CHICAGO.

Please mention Bee Journal when writing.

KEYSTONE

Makes dehorning easy and painless. Cuts on four sides at once. It never bruises nor crushes. Send for circulars.

DEHORNER

Endorsed by colleges and experts. Highest award World's Fair. Most humane because the quickest and easiest.

M. T. PHILLIPS, Pomeroy, Pa., (Successor to A. C. BROSIUS).

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The Emerson Binder.

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee



Journal for one year—both for only \$1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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We Can't Give Away Anything

You pay for what you get in this world. You understand that. But as a business proposition we want you to try our great medicine for Indigestion, Constipation, Biliousness, Sick Headache, Insomnia, "the Blues," and like complaints—

Laxative NERVO-VITAL Tablets

We know you won't buy it, until you know something about it. The best way to get you to know how good it is, is to let you try it. That's what we do. Send Stamp for "Health" booklet, and we will send you a free sample package, that you may try it yourself. We know you will always keep it in the house, if you once try it. What fairer offer could we make? At all Druggists—10 and 25 cents.

Handsome Stick Pin FREE!

If, instead of sending for a sample, you send us 25c we will send you "Health" booklet, a 25c box and a handsome gold stick-pin, set with emerald, ruby or pearl, warranted to be worth double the money. Order by number. This is an extra introductory offer. Only one pin to one person. If unsatisfactory, money returned. Send now while the offer is good.

MODERN REMEDY COMPANY, KEWANEE, ILLINOIS.

[This company will do exactly as it promises.—Editors.]

for this place was not a good one for bees. Now some say I "make" my section honey, but the most of them want bees. I have disposed of my entire crop around home, and have also bought some to sell.

On page 617, it is asked if Eastern Oklahoma is a good location for bees. It is not as good as some places, but I believe with careful attention bees will average 50 pounds of comb honey per colony here. Our honey is from sumac, both black and white, and cotton, which makes a No. 1 white honey. The sumac honey has a nice flavor, but is light amber in color. Alfalfa clover is grown to some extent here, and yields honey at times. Sweet clover does fine, blossoming from seven to eight weeks, or from June 10 to Aug. 10, and has bees on it all of the time.

F. W. VAN DEMARK.

Payne Co., Okla., Oct. 8.

Bees Did Well.

My bees have done well. They are all in good movable-frame hives with plenty of stores for winter.

I have taken off 250 pounds of fine honey this year, and increased from 2 colonies to 8. Honey is in good demand at 15 cents a pound.

H. C. SPRINGER.

Story Co., Iowa, Oct. 4.

Crop Almost a Failure.

My honey crop this year is almost a failure. I think I never experienced a poorer season.

C. W. MCKOWN.

Knox Co., Ill., Oct. 9.

Bees Did Fairly Well.

My bees did fairly well the past season. I shipped 125 cases of honey. It has been very dry here, and we did not get any fall honey-flow.

MRS. FLORA WING.

Montrose Co., Colo., Sept. 29.

Selling Honey—Cleaning Combs.

I notice in "Editorial Comments," on page 627, it is said that Doolittle complains that in 23 years he had sold only 100 pounds of honey for cash to distant parties. My experience has been very different. Up to 1896 I cultivated my home market, but that year my crop was so large that I could not possibly handle it in that way, so I shipped it to commission men and to parties who paid cash on arrival, but the greater part of my crop I sold to those who sent cash with their orders. I received the smallest price from the commission men, the next smallest from those who bought for cash on arrival, and the best price from those who sent cash with the order, as they were mostly consumers.

The result is that since then, with the exception of one customer to whom I sell, I sell all my honey direct to consumers who send cash with the order. Tho my own crop of honey is large, I now buy all the No. 1 extracted honey produced in my own neighborhood, and ship in large quantities besides, from Wisconsin, Illinois, and Ohio.

You also speak of the effect of exposing combs to have the bees clean them of honey. I keep about 400 colo-

Sharpley Cream Separators: Profitable Dairying

SPECIAL NOTICE!

Last winter's cut of basswood is the whitest it has been for many seasons. We are now making sections out of this new stock and therefore are in a position to furnish you with the very finest quality in the market.

LEWIS WHITE-POLISHT SECTIONS

Are perfect in workmanship and color.

Orders shipped immediately upon receipt. A complete line of everything needed in the apiary. Five different styles of Bee-Hives.

Lewis Foundation Fastener simplest and best machine for the purpose. Price, ONE DOLLAR, without Lamp.

G. B. LEWIS CO., Watertown, Wis., U.S.A.

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ASSOCIATION.**
(INCORPORATED.)

We Are Importers and Breeders

of Belgian Hares. Our stud is led by Wantage Fox, (score 96); Champion Duke of Cheshire, (winner 13 First and Gold medal); Buttercup (score 96). We have an unusually good lot of youngsters. For prices, etc., address our Chicago office.

CALIFORNIA BELGIAN HARE ASSOCIATION,

Breeding Farm, Alameda, California.

340 Dearborn St., Chicago, Ill.

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**26 cents Cash
paid for Beeswax.**

This is a good time to send in your Beeswax. We are paying 26 cents a pound—CASH—for best yellow, upon its receipt, or 28 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO.

"The Prohibition Hand-Book and Voter's Manual,"

Size, 5x7 Inches; 50 Pages.

It contains Platform, Sketches, Pictures and Letters of Acceptance of Candidates and much valuable Statistical matter. Full of Facts. An Argument Settler. Pass them around. Price, 10c per copy, postpaid; \$1.00 per dozen, postpaid. Send your order at once to

ALONZO E. WILSON, Room 823—153 La Salle St., Chicago, Ill.

Please mention Bee Journal when writing.

Yellow Sweet Clover Seed

WE HAVE IT AT LAST!

We have finally succeeded in getting a SMALL quantity of the seed of the YELLOW variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in height. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

A QUARTER POUND FOR SENDING ONE NEW SUBSCRIPTION.

So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us ONE NEW subscriber for the American Bee Journal one year, with \$1.00; or ¼ pound by mail for 30 cents.

We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered last season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

GEORGE W. YORK & CO.,

118 Michigan St., - CHICAGO, ILL.

PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus

Honey.

Being the cleanest is usually work the quickest of any foundation made.

J. A. VAN DEUSEN,

Sole Manufacturer,

Sprout Brook, Montgomery Co., N.Y.

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BEE-SUPPLIES!

Root's Goods at Root's Prices!

POUNDER'S HONEY-JARS and every-

thing used by bee-keepers. Prompt

Service—low freight rate. Catalog

free. **WALTER S. POWDER,**

512 Mass. Ave., INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

Belgian Hare Guide AND DIRECTORY OF BREEDERS. Price 25c

Inland Poultry Journal Co., Indianapolis, Ind.

Please mention Bee Journal when writing.

Please mention the Bee Journal when writing Advertisers.

nies of bees, but tho I run them exclusively for extracted honey, they swarm. In the fall I unite heavily. I aim to do all the uniting for a single apiary in a single day, throwing the combs on the ground some distance from the hive, as I unite them. At first they act wild, later they become quiet, and by-and-by gentle, and can be brusht off the combs on which they are at work with the hand without any danger of attack. Towards evening the combs are all ready to be stored away. But it might not work as well with one not used to it.

M. V. FACEY.

Fillmore Co., Minn., Oct. 6.

Bees Did Well this Year.

My bees have done very well this summer, and are in fine condition for wintering. I shall winter about 200 colonies this year.

I get the Bee Journal every week right on time, and always save it for Sunday evening. It is bright and newsy, and full of little items of interest, and I enjoy it very much.

My specialty is the rearing of bees for the use of farmers. I always advise those to whom I sell bees—where they ask for advice as to the care of them—to take a year's subscription of the American Bee Journal, read it carefully, follow directions, and I will guarantee they will be all right in their care of the bees.

CHARLES A. HOLMES.

Suffolk Co., Mass., Oct. 8.

One of the Common Asters.

I send you a sample of some flowers that are in full bloom here. If they had not bloomed the bees would all have starved to death.

JOHN CRAIG.

Macoupin Co., Ill., Oct. 1.

(We referred the above to Prof. Walton, who replies as follows:—EDITOR.)

Of the autumn nectar-bearing flowers, the asters are dearer to the apiarist's heart than almost all others, and happy is the bee-keeper who is fortunate enough to live in a district that is unfortunate enough to be over-run with these weeds. The asters are hardy plants, and will thrive anywhere if left to themselves, especially in waste pasture-land or open wood-lots. While the average farmer regards them with an evil eye, and wishes them well out of his way, they possess one redeeming quality precious in the sight of bees. Altho the honey obtained from the asters is not of the very best, it is nevertheless abundant and good for wintering purposes.

The specimen you sent is the Aster ericoides, and is found very abundant in the middle and western States.—C. L. WALTON.

The Pasteboard Queen-Cage.

Seeing that the Root Company has been so successful with the queen-cage with cardboard over the food instead of a cork, I want to give my experience in that line.

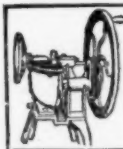
My premium queen from Dr. Miller came in such a cage, without a dead bee in the cage, and I congratulated myself on having received one queen in fine shape. Out I went to my queen-

less colony to introduce her to her new home and family. I opened the hive, took a frame from the side, spread the others to make room for the cage to hang between them, and lookt for the cork to remove, when, lo! there stared me in the face a piece of cardboard full of small holes, and on it were printed very plainly the words, "Do not remove; see directions." So the directions were carefully read, and the same words greeted me there, "Do not remove the card; the bees will gnaw thru and liberate the queen in two or three days." Thinks I, "That's a new wrinkle; but it must be right for it came from Dr. Miller, so here goes."

Well, being busy, and supposing the queen was out, I did not open the hive again for ten days, and what was my surprise to find the cardboard untouched, the bees in the cage all dead, and the queen badly daubed and feeble. I at once liberated her, the bees started to clean her up, and I closed the hive. Now my queen is gone. In order to make sure that I did not overlook her, I ran the bees all thru a queen-guard, but no queen was found, so I have doubled that colony in with another.

The next time I get a queen in a cage with cardboard on there will be a separation between them before the queen goes into the hive. I will go on record as the one percent that made a failure with the cardboard on the cage.

Winona Co., Minn. L. J. CLARK.



Egg Record Book Free.

Our new free catalogue contains a 12-page egg record, enabling you to keep track of what your bees do. It also describes the

Humphrey Green Bone and Cutter
Vegetable
guaranteed to cut more bone in less time and with less labor than any other cutter made. Your money back if you're not satisfied.

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38Est Mention the American Bee Journal.

BEES QUEENS
Smokers, Sections, Comb Foundation And all Apian Supplies cheap. Send for FREE Catalogue. **E. T. FLANAGAN, Bellville, Mo.**

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Another American Triumph.—The following letter has been received at West Chester, Pa., by Mr. P. M. Sharples, manufacturer of the Sharples Cream Separators, and will give great pleasure to thousands of Mr. Sharples' friends and users of his machines. Of course this recognition of merit was quite confidently expected, but the assured fact is a great satisfaction. We congratulate Mr. Sharples and his associates, including the humblest workman on his pay roll, whose combined efforts have deserved this noteworthy award:

U. S. DEPT. OF AGRICULTURE,
BUREAU OF ANIMAL INDUSTRY, DAIRY DIVISION
WASHINGTON, D. C., Aug. 27, 1900.

MR. P. M. SHARPLES, West Chester, Pa.
DEAR SIR:—It gives me pleasure to inform you that we have just received from Major Henry E. Alvord, Chief of this Division, and now in charge of the U. S. Animal Industry Exhibit at the Paris Exposition, a partial report of awards on dairy machinery and products in the U. S. Collective Exhibit, which states that the Cream Separators sent by you HAVE BEEN AWARDED THE GOLD MEDAL.

Very respectfully, **R. A. PEARSON,**
Acting Chief of this Division.

Please mention Bee Journal when writing advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Oct. 8.—The receipts of all kinds of honey are lighter than usual at this season of the year. The market is steady with no advance probable, as prices are now at a point that is curtailing consumption. Fancy white brings 16c; No. 1, 15c, and good white but travel-stained or irregular in shape, 13@14c; amber, 10@12c; dark, 8@10c. Extracted, white clover and basswood, 7½@8c; amber, 7@7½c; buckwheat and other dark grades, 6½@6¾c. Beeswax, 28c. **R. A. BURNETT & Co.**

KANSAS CITY, Oct. 10.—Market steady; 24-pound section-cases, \$3.25 to \$3.40; 12-pound cases, \$1.60 to \$1.80 for fancy white; No. 1 amber, 13@14c per pound. Extracted honey, light color, 7½@8½c; amber, 6@7c. Beeswax, 25@30c. **W. R. CROMWELL PRODUCE CO.,**
Successors to C. C. Clemons & Co.

BUFFALO, Oct. 11.—Market decidedly strong and active, as demand exceeds supply of fancy 1-pound comb, which is selling at 17@18c to-day; receipts small. Dark, 10@14c, as to grade. Beeswax, 25@33c, as to grade. **BATTERSON & Co.**

NEW YORK, Oct. 11.—Comb honey in good demand for all grades at 15@16c for fancy white; 13@14c for No. 1 white; 12c for amber and 10@11c buckwheat. Hardly enough supply to meet demand. Extracted firm at 7@7½c for white, 6½@7c for light amber, 6c amber, and 5½c dark; good demand for Southern, basswood and clover. Beeswax quiet at 27c.

HILDRETH & SEGELKEN.

BOSTON, Sept. 21.—Our honey market is very strong at the following prices, with supplies very light: Fancy one-pound cartons, 17c; A No. 1, 15@16c; No. 1, 15c; No. 2, 12@13c. Extracted from 7½@8½c, according to quality. Can see no reason why these prices should not be well maintained right thru the season.

BLAKE, SCOTT & LEE,

CINCINNATI, Sept. 21.—The demand for fancy comb honey is good and finds ready sale at 16@16½c; No. 1, 15c. The demand for extracted honey at present is slow and offer same by the barrel as follows: White clover, 8½@9c; Southern, 6½@7½c; Florida, 7@8 cents, according to quality. Beeswax, 27c.

The above are MY SELLING PRICES. I do not handle any honey on commission, but pay spot cash on delivery. **C. H. W. WEBER.**

ALBANY, N. Y., Sept. 22.—Demand good, now at firm prices: White comb, 15@16c; mixt white, 13@15c; amber, 12@13c; buckwheat, 11@12c. Extracted, white, 8@9c; mixt white, 8@8½c; amber, 7@7½c; buckwheat, 6@6½c. **H. R. WRIGHT.**

DETROIT, Oct. 6.—Fancy white comb, 15@16c; darker grades, 11@12c. Extracted, white, 8@9c; amber, 5@6c. Beeswax, 26@27c.

No demand at present for extracted.

M. H. HUNT & SON.

SAN FRANCISCO, Sept. 26.—White comb, 13@14c; amber, 11½@12½c; dark, 8@9c. Extracted, white, 7½@8c; light amber 6½@7½c; amber, 5½@6½c. Beeswax, 26@28c.

Market presents a healthy tone, being lightly stocked with all descriptions, with inquiry not lacking, even for most common qualities, altho choice to select naturally commands the most attention.

WANTED—HONEY AND BEESWAX.

We have a tremendous and growing trade in this line, and would like to hear from all who have such goods to sell in any part of the country, with quality, description, and lowest cash price. **THOS. C. STANLEY & SON, Fairfield, Ill.**

Wanted To Buy Honey
What have you to offer and at what price?
33Atf **ED WILKINSON, Wilton, Wis.**

Chicago.—The regular semi-annual meeting of the Chicago Bee-Keepers' Association, will be held in Wellington Hall, 70 N. Clark Street, Saturday, Nov. 3, 1900, from 2 to 5 in the afternoon, and 7 to 9 o'clock in the evening. Dr. C. C. Miller will probably be present. The regular annual election of officers will occur. The general subject for discussion will be reports on the season's work. All bee-keepers are requested to send questions by mail to the President, Mr. George W. York, who will assign them to others to be answered. Ladies are especially invited to be present.

GEORGE W. YORK, Executive
MRS. N. L. STOW, Committee
HERMAN F. MOORE, Committee

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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	60c	\$1.00	\$2.25	\$4.00
Crimson Clover	70c	1.20	2.75	5.00
Alsike Clover	80c	1.50	3.50	6.50
White Clover	90c	1.70	3.75	6.50
Alfalfa Clover	80c	1.40	3.25	6.00

Prices subject to market changes.
Add 25 cents to your order, for cartage, if wanted by freight.

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118 Michigan Street, CHICAGO, ILL.

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and also located on the Yazoo & Mississippi Valley R.R. in the famous

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Shipping-Cases, Root's No-Drip; Five-Gallon Cans for extracted honey, Danz. Cartons for comb honey. Cash or trade for beeswax. Send for catalog. M. H. Hunt & Son, Bell Branch, Mich.

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AT ALL TIMES.

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Bingham Brass Smokers,

made of sheet-brass which does not rust or burn at should last a life-time. You need one, but they cost 25 cents more than tin of the same size. The little pen cut shows our brass hinge put on the three larger sizes.

No wonder Bingham's 4-inch Smoke Engine goes without puffing and does not

DROP INKY DROPS.

The perforated steel fire-grate has 381 holes to air the fuel and support the fire. Prices: Heavy Tin Smoke Engine, four-inch Stove, per mail, \$1.50; 3½-inch, \$1.10; three-inch, \$1.00; 2½-inch, 90 cents; two-inch, 65 cents.

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AS A PREMIUM
For sending us ONE NEW SUBSCRIBER to the Bee Journal for the balance of this year, with 30 cents, we will mail you FOUR of these pretty buttons for wearing on the coat-lapel. (You can wear one and give the others to the children.) The queen has a golden tinge.

This offer is made only to our present regular subscribers.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate, it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

Prices of Buttons alone, postpaid: One button, 8 cts.; 2 buttons, 6 cts. each; 5 or more, 5 cts. each. (Stamps taken.) Address,

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